

- 1886 Sharp . . . . .Trans. Roy. Dublin Soc. (2), vol. 3, p. 445.  
 1892 Horn . . . . .Trans. Amer. Ent. Soc., vol. 19, p. 223.  
 1893 Brown . . . . .Manual N. Zealand Coleop., pt. 5, p. 1305.  
 1914 Clavareau . . . . .Coleop. Catal. Junk, pt. 59, p. 22, p. 28.  
 1921 et seq. RAE . . . . .Rev. Appl. Ent. A (see indices).  
 1932 Clark . . . . .N. Zealand Journ. Sci. Tech., vol. 13, p. 235-243.  
 1934 Schaeffer . . . . .Journ. N. Y. Ent. Soc., vol. 41, p. 470.

NOMENCLATURE OF *LISTRODERES OBLIQUUS* KLUG (THE  
 VEGETABLE WEEVIL) (COLEOPTERA : CURCULIONIDAE).

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Originally described from Brazil, the vegetable weevil has been widely dispersed by commerce, and is now established in several countries. At different times different technical names have been applied to the species; at present, it is called *Listroderes obliquus* Gyllenhal by most North American writers, and *Listroderes costirostris* Schoenherr by writers of other countries. Its correct name appears to be *Listroderes obliquus* Klug, though this conclusion, being based largely on published statements, may be modified by future studies of the types of Schoenherr, Klug, and Gyllenhal (presumably in European museums) or by biological investigations of *costirostris* in its native habitat.

The names chiefly involved are: *Listroderes costirostris* Schoen. 1826, proposed for a species from Rio de Janeiro; *L. obliquus* Klug 1829, for a species from southern Brazil; and *L. obliquus* Gyll. 1834, for a new variety of *costirostris* from southern Brazil. In describing *obliquus*, both Klug and Gyllenhal cite "*obliquus* Dej. in litt.," and this citation, in the absence of contrary evidence and pending examination of the actual types, is here considered to establish *obliquus* Gyll. as a synonym of *obliquus* Klug.

The exact relation of *obliquus* Klug to *costirostris* Schoen. is problematical. No structural difference between them has ever been reported, though Mississippi, U. S. A., specimens sent by H. S. Barber to G. A. K. Marshall in 1925 were said to be *obliquus* Gyll., but not *costirostris* Schoen. as identified in the British Museum collection. The only other evidence known to me indicating the distinctness of *obliquus* and *costirostris* is the allusion to the male in Schoenherr's original description of *costirostris*; whereas *obliquus*, as far as known, is strictly parthenogenetic. No male of *obliquus* has been reported in the literature, nor was this sex represented among 1,186 Mississippi specimens which I dissected recently. This difference in reproductive nature is obscured or entirely lost sight of if

*obliquus* is sunk as a synonym of *costirostris*; and it seems desirable, therefore, to consider the two names as representing separate species, or strains of a single species, at least until the biological distinction, here assumed actually to exist, is disproved by experimental field studies.

If *costirostris* Schoen. be treated as distinct, the chief synonymy of *obliquus* is: *Listroderes obliquus* Klug 1829.

[*L. obliquus* Gyll. 1834, new synonymy.]

[*Desiantha nociva* French 1908 (*Desiantha nociva* Lea 1909, new synonymy.)]

[*Listroderes costirostris* (authors, not Schoenherr) when referring to the parthenogenetic form.]

The following chronology lists references to the more important papers that bear on the nomenclature of both *obliquus* and *costirostris*:

1821. Dejean, Catalog. Coleop., p. 90, lists *costirostris* Gyll. [? nomen nudum] from Brazil under the generic name *Merionus* Megerle (*Barynotus* Germar). As far as known there are no copies of Megerle's catalogs in the United States, but his papers probably are not a factor in the nomenclature of the vegetable weevil.

1823. Schoenherr, Isis von Oken, heft 10, column 1142: "107 *Listroderes* nob. Typ. *Listr. costirostris* Gyll. n. sp. C. *Hypera insubida* Germ." None of these names seems to be nomenclaturally valid at this date.

1826. Schoenherr, Curculionidum Dispositio Methodica, pp. 158-159, describes *Listroderes*, new genus, and states that the type is "*Listrod. costirostris* Gyllenh. n. sp. *Hypera insubida* Germ. in litt. . . ." Locality, Rio de Janeiro.

Schoenherr's purpose here was to describe a new genus only, but his statements constitute a combined generic and specific description, and both *Listroderes* and *costirostris* date from Schoenherr 1826.

1829. Klug, Preis-Verzeichniss vorrathiger Insectendoubletten, Berlin, p. 6: "67. *Listroderes obliquus* Dej. (i. litt.) fusco-squamosus, thorace linea dorsali, elytris maculis griseis (Magn. fere Curc. Pini L.)" Locality (at beginning of list), "Süd-Brasilien."

This description establishes the name *obliquus* Klug 1829 which takes precedence over *obliquus* Gyllenhal 1834.

1834. Gyllenhal, Gen. et Sp. Curculionidum, vol. 2, part 1, pp. 277-278, describes *costirostris* as a new species (which is a synonym of *costirostris* Schoenherr 1826), citing "*Hypera insubida* Germ in *Litteris*"; and also describes "var.  $\beta$ " citing thereunder "*L. obliquus*. Dom. Com. Dejean in *Litteris*, teste Dom. Schuppel. Habitat . . . Var.  $\beta$ , in Brasilia meridionale. Dom. Schuppel. Mus. Schh."

The description of var.:  $\beta$  validates the name *obliquus* Gyll. 1834; and (*obliquus* Gyll. 1834) = *obliquus* Klug 1829. It is not very improbable that the specimens which Gyllenhal described as *obliquus* were obtained from Klug's "type" series of *obliquus* Klug.

1835. Dejean, Catalog. Coleop. (with 1833 title page), p. 260. Under genus *Listroderes* Schoenherr are listed: *obliquus* Dej., from Brazil, with *elongatulus* Klug and *costirostris* var. Schoenherr as synonyms; and *costirostris* Gyllenhal, from Brazil, with "*Insubida* Germar (Hypera)" in synonymy.

The name *elongatulus* Klug, previously a nomen nudum, appears here to become a synonym of *obliquus* Dej. *Ms.*, Klug, Gyllenhal. For discussion of date of issue of the "1833" Dejean catalog see Kraatz, Berl. Ent. Zeit., vol. 18, 1874, p. 212.

1837. Dejean, Catalog. Coleop., p. 283. Same treatment as in the "1833" Dejean Catalog.

1841. Waterhouse, Proc. Zool. Soc. London, part ix, p. 122, lists *costirostris* Scho. from Maldonado (probably the city in Peru) and from Coquimbo (Chile). These localities are distant from the natural habitat of *costirostris*, and Waterhouse's specimens may have been misidentified. On the same page Waterhouse describes *L. robustus*, new species, from Coquimbo. (See Berg 1881, below.)

1842. Boheman, Gen. et Sp. Curculionidum, vol. 6, part 2, p. 189, citing Gyllenhal 1834, redescribes *L. costirostris* Gyll. and refers also to the Dejean Catalog, edition 2, p. 260, edition 3, p. 283. Boheman then describes a "♀ var. β" and a "♂ var. γ," following which are cited:

"*Listroderes costirostris* var. β. Huj. op. II, p. 277, 1" and "*Listrod. obliquus* Dejean *Catal.* ed. 2, p. 260. ed. 3, p. 283. Patria: Brasilia, Rio-Janeiro, Buenos-Ayres."

The wording of Boheman's description of var. γ is practically the same as that of Gyllenhal's description of var. β (*obliquus* Gyll. 1834).

1871. Gemminger and Harold, Catalog. Coleop., p. 2360, list *costirostris* Gyll. from Brazil, with synonym *insubidus* Germ. in litt., and lists as a variety of *costirostris*, *obliquus* of Dej. Cat., 3 ed. p. 283, and of Gyllenhal 1834, p. 277, with *elongatulus* Klug, Dej. Cat. l. c. as a synonym of this variety (see Dejean 1835 above).

1881. Berg, Stett. Ent. Zeitung, vol. 42, p. 62, records *Listroderes costirostris* Gyll., with synonym (apparently a new synonym) *L. robustus* Waterh., from Central Argentina to Magellan Strait.

According to Schenkling and Marshall 1931 (see below) *robustus* Waterh. is not a synonym of *costirostris*, but a distinct species. The Magellan Strait locality record may apply to *robustus* alone, to *costirostris* alone, to both species, or to neither. The specimens involved should be reidentified.

1907. Kolbe, Ergebnisse der Hamburger Magalhaensischen Sammelreise 1892-93, Hamburg, 1896-1907, Coleoptera, 1907, p. 103, lists *Listroderes costirostris* Gyll. with *L. robustus* Waterhouse as a synonym. Localities: Magellan Strait, Patagonia, Argentina.

The synonymy and distribution are probably taken from Berg 1881.

1908. French, C. A new vegetable pest. The tomato weevil (*Desiantha nociva* Lea). Jour. Dept. Agr. Victoria, vol. 6, part 12, Dec. 10, 1908, pp. 754-755. French's purpose was merely to call attention to an agricultural pest but his remarks on page 754 describe the size and appearance

- of the weevil and constitute an original description of *Desiantha nociva* French 1908, of which *Desiantha nociva* Lea 1909 is a synonym.
1909. French, C. *ibid.*, vol. 7, part 10, Oct. 11, 1909, pp. 642-643. An article on the tomato weevil (*Desiantha nociva* Lea), calling attention to his previous paper "In the Journal for December, 1908." Figures of adult, larva, and pupa are given on page 643.
1909. Lea, A. M., *Trans. and Proc. and Rept. Royal Soc. So. Australia*, vol. 33, p. 174, describes *Desiantha nociva*, n. sp. Lea, which is a synonym of *D. nociva* French 1908.
1922. Harned, *Quart. Bull. State Plant Board Miss.*, vol. 2, no. 1-2, Apr.-July, 1922, pp. 6-8, discusses the weevil without definite scientific name, stating that there is a disagreement among workers as to whether the species is a *Listroderes* of South American origin or the Australian *Desiantha nociva*.
1923. Chittenden, U. S. Dept. Agr., Dept. Circ. 282, July 31, 8 pp., recommends the use of the name *Desiantha nociva*, though suggesting that the weevil may be a South American species of *Listroderes*.
1924. McCarthy, T., *Agricultural Gazette N. S. Wales*, Aug. 1, pp. 573-580, states: "In this account I will refer to it as *Listroderes nociva*, based on authority of Dr. Guy A. Marshall" . . . who writes:  
 'This weevil has nothing whatever to do with the genus *Desiantha*, but belongs to the South American genus *Listroderes*, and I have found in the British Museum a specimen of a species from Brazil with which it is probably conspecific. I have quite recently received the same species from South Africa, where it is attacking turnips.' "
1925. Howard, *Ann. Rept. Entomologist, U. S. Dept. Agr.*, Sept. 20, p. 22, states that the weevil ". . . has now been definitely determined as *Listroderes obliquus*." He says also that reproduction is parthenogenetic.
1926. Chittenden, *Proc. Biol. Soc. Wash.*, vol. 39, July 30, pp. 71-74, in a paper on *Listroderes apicalis* Waterh., alludes to *L. "obliquus* Fab." (meaning *obliquus* Gyll.), but gives no reason for the suppression of the name *Desiantha nociva* used in his 1923 paper. The erroneous labeling of the figures of *obliquus* and *apicalis* on the original plate I may cause confusion unless the corrected plate is at hand.
1926. Hustache, *Anales de Museo Nacional de Hist. Natural*, vol. 34, December, p. 199, lists *costirostris* Gyll. from Buenos Aires.
1927. Lewis, H. C., *Calif. Dept. Agr. Monthly Bull.*, vol. 16, no. 7, pp. 378-392, correctly states (p. 379) that the report of *L. apicalis* in Hawaii (*Rept. of the Bd. of Comm. of Agr. and For. Ter. Hawaii*, Dec. 1926, p. 45) is a reference to what is probably the same species (i. e., *obliquus*).  
 Note: The U. S. National Museum collection contains a specimen of the vegetable weevil collected on Mana Island, Hawaii, May 12, 1926, by Mr. Swezey.
1931. Schenkling and Marshall, *Junk Catalog. Coleop.*, part 114, *Cylindrorrhininae*, p. 7, list *costirostris* Schoen., with *nocivus* Lea as a synonym and *obliquus* Gyll. as an "ab." (aberration). Localities for *costirostris*: Magellan Strait, Patagonia, Argentina, Brazil, Australia, South Africa. No North American localities are cited.

1931. Essig, A History of Entomology, 1931, pp. 203-206. A discussion of the introduction, spread, habits, and nomenclature.
1932. Lovell, O. H. The vegetable weevil, *Listroderes obliquus*. Calif. Agr. Exp. Sta., Bul. 546, 19 pp. On page 11 the weevil is said to be parthenogenetic.
1933. Essig. Nomenclature of the vegetable weevil. Science, vol. 77, no. 2008, pp. 605-606.
1933. Muggeridge, J., New Zealand Journal of Agriculture, vol. 47, no. 4, Oct. 20, p. 221-224, records *Listroderes costirostris* from New Zealand.

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#### MINUTES OF A SPECIAL BUSINESS MEETING OF THE ENTOMOLOGICAL SOCIETY OF WASHINGTON.

A special business meeting of the society was held at 4 p. m., Thursday, October 8, 1936, in Room 43 of the new building of the National Museum. The finances of the society, particularly with respect to certain bonds owned by the society, which had become misplaced by the former Corresponding Secretary-Treasurer, were discussed. It was agreed on vote of the society that this individual's note in the amount of face value without interest, payable in 5 years, be accepted.

HENRY H. RICHARDSON,  
Recording Secretary.

#### MINUTES OF THE 477TH REGULAR MEETING OF THE ENTOMOLOGICAL SOCIETY OF WASHINGTON, NOVEMBER 5, 1936.

The 477th meeting of the society was held at 8 p. m., Thursday, November 5, 1936, in Room 43 of the Natural History Building of the National Museum. Thirty-two members and six visitors were present with S. B. Fracker, President, presiding. The minutes of the 476th regular meeting and the special business meeting of October 8, 1936, were read and approved. The chair stated that if there was no objection the publication of the minutes of the special business meeting would be left to the discretion of the Executive Committee.

A publication entitled "The Control and Eradication of Prickly Pear in Australia" by Allan C. Dodd (Bull. Ent. Res. 27 : 503, 1936) was brought to the society's attention by Carl Heinrich. Mr. Heinrich stated that in this outstanding use of an insect for weed eradication, 25 million acres of land had been retrieved.

A resolution drawn up by R. W. Harned and C. F. W. Muesebeck in connection with the death of J. W. Folsom was read by the recording secretary and is included in the minutes by unanimous vote of the society as follows:

"Doctor Justus Watson Folsom was only recently elected to membership in this Society, and, stationed at Tallulah, La., he has been unable to attend our meetings. Nevertheless, if not personally, at least through his much used and several times reprinted textbook, "Entomology with Special Reference to its Ecological Aspects," and through his sound contributions to the taxonomy of the Collembola, he was known to us all.

"It is with sorrow that we record his loss to this Society and to science. At